

# **A BACK-PROPAGATION NEURAL NETWORK WITH ENHANCED NEURON CHARACTERISTICS**

## **Abstract of the Disclosure**

A neural network system includes a feedforward network comprising at least one neuron circuit for producing an activation function and a first derivative of the activation function and a weight updating circuit for producing updated weights to the feedforward network. The system also includes an error back-propagation network for receiving the first derivative of the activation function and to provide weight change data information to the weight updating circuit.

2007-03-24-09:30

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
[www.finnegan.com](http://www.finnegan.com)